

## PATENT ABSTRACTS OF JAPAN

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C25B 1/00

(21)Application number : **62-027244**

(71)Applicant : **TOSOH CORP**

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**10.02.1987**

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### (54) **PRODUCTION OF METAL HYDROXIDE**

(57)Abstract:

**PURPOSE:** To easily and efficiently produce the title high-purity and fine metal hydroxide at a low cost, by carrying out electrolysis in an electrolytic cell having a diaphragm with a metal as the anode and an aq. soln. of an org. acid as the electrolyte, and neutralizing the formed soln. of a metal ion.

**CONSTITUTION:** In the electrolysis of a transition metal, etc., a metal incapable of being passivated is used as the anode, and a cathode of Ti, is arranged in the electrolytic cell across the diaphragm. Electrolysis is carried out in the cell with an aq. soln. of an org. acid such as acetic acid as the electrolyte. A fluorine-based anion-exchange membrane is preferably used as the diaphragm to control a leak of the metal ion, etc., into the cathode chamber. An appropriate salt such as ammonium acetate is preferably added to the electrolyte in the cathod chamber. The anolde metla is dissolved by the electrolysis, and a soln. of the metal ion is formed. The soln. of the metal ion is neutralized by a neutralizer such as ammonia, a pricipitant such as urea is added, as required, and a precipitate of the metal hydroxide is obtained. The precipitate is dried, if necessary, by a spray drier, etc., and metal hydroxide powder is obtained.

## PRODUCTION OF METAL HYDROXIDE

**Publication number:** JP63195288 (A)  
**Publication date:** 1988-08-12  
**Inventor(s):** OGAWA NOBUHIRO +  
**Applicant(s):** TOSOH CORP +  
**Classification:**  
 - **international:** **C25B1/00; C25B1/00;** (IPC1-7): C25B1/00  
 - **European:**  
**Application number:** JP19870027244 19870210  
**Priority number(s):** JP19870027244 19870210

### Abstract of JP 63195288 (A)

**PURPOSE:**To easily and efficiently produce the title high-purity and fine metal hydroxide at a low cost, by carrying out electrolysis in an electrolytic cell having a diaphragm with a metal as the anode and an aq. soln. of an org. acid as the electrolyte, and neutralizing the formed soln. of a metal ion.

**CONSTITUTION:**In the electrolysis of a transition metal, etc., a metal incapable of being passivated is used as the anode, and a cathode of Ti, is arranged in the electrolytic cell across the diaphragm. Electrolysis is carried out in the cell with an aq. soln. of an org. acid such as acetic acid as the electrolyte. A fluorine-based anion-exchange membrane is preferably used as the diaphragm to control a leak of the metal ion, etc., into the cathode chamber. An appropriate salt such as ammonium acetate is preferably added to the electrolyte in the cathod chamber. The anode metal is dissolved by the electrolysis, and a soln. of the metal ion is formed. The soln. of the metal ion is neutralized by a neutralizer such as ammonia, a precipitant such as urea is added, as required, and a precipitate of the metal hydroxide is obtained. The precipitate is dried, if necessary, by a spray drier, etc., and metal hydroxide powder is obtained.

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ANSWER 1 OF 1 CAPLUS COPYRIGHT 2010 ACS on STN

AN 1988:639283 CAPLUS Full-text

DN 109:239283

OREF 109:39447a,39450a

ED Entered STN: 24 Dec 1988

TI Manufacture of a high-purity and fine metal hydroxide

IN Ogawa, Nobuhiro

PA Tosoh Corp., Japan

SO Japan Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

CC 72-7 (Electrochemistry)

Section cross-reference(s): 49, 76

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63195288	A	19880812	JP 1987-27244	
19870210 <--				
PRAI JP 1987-27244		19870210		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 63195288	IPCI	C25B0001-00 [ICM,4]
	IPCR	C25B0001-00 [I,C*]; C25B0001-00 [I,A]

AB The title method involves dissolving a metal (anode), e.g., In, in a membrane-divided cell containing an aqueous solution of an organic acid (e.g., HCOOH) to form metal ions, and neutralizing the ions. The hydroxide is useful for electroceramics.

ANSWER 1 OF 1 WPIX COPYRIGHT 2010 THOMSON REUTERS on STN  
 AN 1988-267785 [198838] WPIX Full-text  
 DNC C1988-119285 [199321]  
 TI Fine-grained high purity metal hydroxide preparation - using  
 electrolytic cell  
 containing aqueous organic acid solution in which anode metal  
 dissolves and  
 neutralising  
 DC E37; J03  
 IN OGAWA N  
 PA (TOYJ-C) TOYO SODA MFG CO LTD  
 CYC 1  
 PI JP 63195288 A 19880812 (198838)\* JA 7[1]  
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 ADT JP 1987-27244 19870210  
 PRAI JP 1987-27244 19870210  
 IPCR C25B0001-00 [I,A]; C25B0001-00 [I,C]  
 FCL C25B0001-00 Z  
 FTRM 4K021; 4K021/AB25; 4K021/BA10; 4K021/BC09; 4K021/DB18; 4K021/DB36  
 AB JP 63195288 A UPAB: 20060105  
 In an electrolytic cell equipped with a metal anode and a cathode  
 separated by a diaphragm, organic acid aqueous solution is used in  
 the electrolysis to form a metal ion solution by dissolution of  
 the anode metal, and then neutralised.  
 USE/ADVANTAGE - For mfg. fine-grained high-purity metal  
 hydroxides. - In an example, a 20% formic acid aqueous solution  
 was electrolysed in an electrolytic cell with an In anode and a Pt  
 cathode separated by a 'SF-34' (RTM), an F-based anion exchange  
 membrane diaphragm, under a current density of 3 A/dm<sup>2</sup> at 25 deg.c,  
 to give 0.5 micron. In hydroxide particles containing impurities  
 beyond the detection of ICP analysis.  
 FS CPI  
 MC CPI: E35; E35-F; J03-B